

Claims

1. A process for producing vitamin C from L-sorboseone comprising contacting L-sorboseone with a purified L-sorboseone dehydrogenase having the following physico-chemical properties:
 - 5 a) Molecular weight: $150,000 \pm 6,000$ Da or $230,000 \pm 9,000$ Da (consisting of 2 or 3 homologous subunits, each subunit having a molecular weight of $75,000 \pm 3,000$ Da);
 - b) Substrate specificity: active on aldehyde compounds;
 - c) Cofactors: pyrroloquinoline quinone and heme c;
 - d) Optimum pH: 6.4 to 8.2 for the production of vitamin C from L-sorboseone;
 - 10 e) Inhibitors: Co^{2+} , Cu^{2+} , Fe^{2+} , Ni^{2+} , Zn^{2+} , monooiodoacetate and ethylenediamine tetraacetic acid;
in the presence of an electron acceptor, and isolating the resulting vitamin C from the reaction mixture.
2. The process according to claim 1, wherein the L-sorboseone dehydrogenase is derived from the strain *Gluconobacter oxydans* DSM No. 4025 (FERM BP-3812), a microorganism belonging to the genus *Gluconobacter* having the identifying characteristics of *G. oxydans* DSM 4025 (FERM BP-3812) or mutants thereof.
- 15 3. The process according to claim 1 or 2, wherein the reaction is carried out at a pH of about 6.4 to about 9.0 and at a temperature of about 20°C to about 60°C for about 0.5 to about 48 h.
- 20 4. The process according to any one of claims 1 to 3, wherein reaction is carried out at a pH of about 7.0 to about 8.2 and at a temperature of about 20°C to about 50°C for about 0.5 to about 24 h.
